

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the Final Office Action of May 16, 2005 (hereinafter "Final Action"). In response, Applicants have amended independent Claims 6 and 15 to clarify that the capping layer and the second insulating are patterned together such that parts of the first insulating layer that were covered by the second insulating layer are exposed. Applicants respectfully submit that the cited reference fails to disclose at least the recitations of the independent claims as amended. Accordingly, Applicants submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

Independent Claims 6 and 15 are Patentable

Independent Claim 6 stands rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 6,078,073 to Habu et al. (hereinafter "Habu"). Independent Claim 6 recites, in part:

...
forming a pattern comprising a pair of mesa regions on a substrate;
forming a first insulating layer on the pair of mesa regions;
forming a second insulating layer on the pair of mesa regions and the substrate;
forming a capping layer on the second insulating layer;
patterning the capping layer and the second insulating layer together such that parts of the first insulating layer that were covered by the second insulating layer are exposed;
... (Emphasis added.)

Independent Claim 15 includes recitations similar to those of Claim 6 reproduced above.

The Office Action alleges that the insulating film 4 and the insulating layer 7 shown in FIGS. 7A and 7B of Habu correspond to the second insulating layer and the capping layer recitations of Claim 6, respectively. (Final Action, page 4). The Final Action acknowledges that Habu does not show the insulating film 4 and the insulating layer 7 being patterned together, but alleges it would be obvious to do so because it would reduce fabricating time and increase the smoothness and uniformity of the stacked layers. (Final Action, page 8).

Applicants respectfully disagree that it would be obvious to pattern the insulating film 4 and the insulating layer 7 together because Habu teaches that the insulating film 4 is patterned initially as part of forming the gate electrode 2 (Habu, col. 9, lines 1 - 9) and is specifically designed so as not to be patterned when the insulating layer 7 is patterned later. (Habu, col. 15, lines 4 - 25).

Moreover, independent Claims 6 and 15 have been amended to clarify that the “parts of the first insulating layer that were covered by the second insulating layer are exposed” when the capping layer and second insulating layer are patterned together. The Final Action alleges that the oxide film 3 corresponds to the first insulating layer. (Final Action, page 2). Applicants respectfully submit, however, that when the insulating film 4 (alleged to correspond to the second insulating layer) is patterned, that no portion of the oxide film 3 that was covered by the insulating film 4 is exposed. This is illustrated, for example, in FIG. 3A of Habu. At col. 9, lines 1 – 9, Habu explains that the insulating film 4 and the oxide film 3 are patterned together to form the gate electrode 2. Once the gate electrode 2 is initially formed, no portion of the oxide film 3 is exposed. Habu explains that a sidewall oxide 3’ may then be formed on the side surface of the gate electrode. (Habu, col. 9, lines 4 – 7). In sharp contrast with the recitations of Claims 6 and 15, however, the sidewall oxide 3’ was not previously covered by the insulating film 4

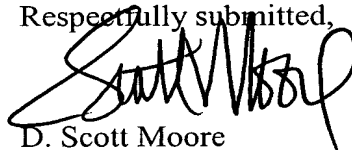
Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claims 6 and 15 are patentable over Habu and that Claims 7 – 14 and 16 - 24 are patentable at least per the patentability of independent Claims 6 and 15.

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CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,




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